



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identification

Product Name:	Ricoh Toner Type 320
Product Number:	887630
Chemical Name:	Mixture
CAS Number:	0-00-0

Company Identification

Ricoh Corporation
5 Dedrick Place
West Caldwell, NJ 07006
(973) 882-2000, (800) 336-6737 (For product information)
(800) 336-6737 (For emergencies)

GENERAL USE:

FT3013, FT3213, FT3513, FT3713.

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Amount</u>	<u>CAS Number</u>
POLYESTER RESIN (CAS# CONFIDENTIAL)	20.0 - 30.0 %	0-00-0
STYRENE ACRYLIC POLYMER	55.0 - 65.0 %	25036-19-5
*POLYOLEFINE	3.0 - 5.0 %	9003-07-0
*CARBON BLACK	10.0 - 15.0 %	1333-86-4

MISCELLANEOUS:

RTECS Number: N/App.

*Non-hazardous Polyolefine is listed on the IARC Monograph. *Carbon Black was reclassified by the IARC as a Group 2B substance.

EXPOSURE GUIDELINES:

*Carbon Black

OSHA PEL: 3.5 mg/m³
ACGIH TWA: 3.5 mg/m³



3. HAZARDS IDENTIFICATION

***** EMERGENCY OVERVIEW *****
*
* THIS PRODUCT IS NON-HAZARDOUS. *
* *

PRIMARY ENTRY ROUTES:

Eyes, inhalation, ingestion.

ACUTE EYE EFFECTS:

May cause temporary eye discomfort.

ACUTE SKIN EFFECTS:

(guinea-pig): not sensitized.

ACUTE INHALATION EFFECTS:

Gasping.

ACUTE INGESTION EFFECTS:

No information.

CARCINOGENICITY:

In 1996 the IARC reevaluated carbon black as a Group 2B carcinogen (possible human carcinogen) based on the result of inhalation studies on rats. This was determined on the development of lung tumors in rats receiving chronic (large amounts over a long period of time) inhalation exposures of free carbon black at levels that induce particle overload of the lungs. There were no observed incidence of tumors in either dermal or oral studies. A two year bioassay using typical toner preparations containing carbon black showed no association between toner exposure (inhalation or otherwise) and tumor development in rats. Studies performed in animal models other than rats have not demonstrated an association between carbon black and lung tumors.

MEDICAL CONDITION AGGRAVATED BY LONG-TERM EXPOSURE:

Will not occur.

CHRONIC EFFECTS:

Prolonged inhalation of excessive dust may cause lung damage that is attributed to 'lung overloading', a generic response to excessive amounts of any dust retained in the lungs for a prolonged interval. Use of this product as intended does not result in inhalation of excessive dust.

MISCELLANEOUS:

NTP? No IARC Monographs? Yes OSHA Regulated? No.

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Signs and Symptoms of Exposure: None under normal conditions of use.

EYE CONTACT FIRST AID:

SKIN CONTACT FIRST AID:

INHALATION FIRST AID:

INGESTION FIRST AID:

MISCELLANEOUS:

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

COC Flash Point: N/A

Autoignition Temperature: N/A

FLAMMABLE LIMITS IN AIR

LEL: N/A

UEL: N/A

FLAMMABILITY CLASSIFICATION:

Not applicable.

EXTINGUISHING MEDIA:

Carbon dioxide, dry chemicals, foam or water spray(fog) may be suitable.

UNUSUAL FIRE OR EXPLOSION HAZARDS:

Airborne dispersal of most finely divided organic powders such as toner may form an explosive mixture. Do not incinerate loose or spilled toner.

FIRE FIGHTING INSTRUCTIONS:

FIRE FIGHTING INSTRUCTIONS:
Special Fire-Fighting Procedures: Airborne dispersal of most finely divided organic powders such as toner may form an explosive mixture. Do not incinerate loose or spilled toner.

UNCONTROLLED DOCUMENT



6. ACCIDENTAL RELEASE MEASURES

SPILL / LEAK PROCEDURES:

If spilled, sweep up using an approved toner vacuum cleaner with a .5 micron filter or smaller such as the Atrix AAA Toner Vacuum (Ricoh EDP Code: 342MIU). Use of a vacuum cleaner not rated for toner particulate could be a potential fire hazard and/or result in personal injury. Remove residue with soap and water.

7. HANDLING AND STORAGE

STORAGE REQUIREMENTS:

Store in a cool, dry place. Keep out of reach of children.

MISCELLANEOUS:

Do not handle in areas where wind blows. Flying powder may enter eyes. Minimize inhalation of dust. Cleanse skin thoroughly after contact, before breaks and meals, and at the end of work periods.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

VENTILATION:

Local Exhaust Ventilation: None required under normal conditions of use.

Special Ventilation Requirements: None required under normal conditions of use.

Mechanical (general): Adequate ventilation.

Other: None.

RESPIRATORY PROTECTION:

None required under normal conditions of use.

PROTECTIVE CLOTHING / EQUIPMENT:

Protective Gloves: None required under normal conditions of use.

Eye Protection: None required under normal conditions of use.

Other Protective Clothing or Equipment: None.

MISCELLANEOUS:

Work and Hygienic Practices: Minimize breathing dust. Cleanse skin thoroughly after contact, before breaks and meals, and at the end of work periods.



9. PHYSICAL AND CHEMICAL PROPERTIES

FORM: Powder
COLOR: Black
ODOR: slight plastic odor
BOILING POINT: Not applicable C
VAPOR PRESSURE: Not applicable psia
VAPOR DENSITY: Not applicable (Air = 1)
SOLUBILITY IN WATER: Negligible: less than 0.1%
SPECIFIC GRAVITY: 1.2 (Water = 1)
MELTING/FREEZING POINT: No data C
% VOLATILES: Not applicable %
EVAPORATION RATE (N-BUAC=1): Not applicable

10. STABILITY AND REACTIVITY

STABILITY:

Stable.

POLYMERIZATION:

Will not Occur.

CHEMICAL INCOMPATIBILITIES:

Not applicable.

CONDITIONS TO AVOID:

Not applicable.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon monoxide and other decomposition products in the case of incomplete combustion.

11. TOXICOLOGICAL INFORMATION

No information available.

12. ECOLOGICAL INFORMATION

No information available.



13. DISPOSAL CONSIDERATIONS

DISPOSAL:

Used toner should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Do not incinerate loose or spilled toner. Disposal regulations vary from locality to locality, therefore, consult your local office of the EPA to determine proper method of disposal.

14. TRANSPORT INFORMATION

PRODUCT LABEL...: Ricoh Toner Type 320

15. REGULATORY INFORMATION

Canadian Disclosure List

*Carbon Black (1333-86-4)

16. OTHER INFORMATION

Prepared By.....: Corporate Quality Assurance/Environmental
Administration
Approved By.....: David Huelbig
Title.....: Safety Engineer
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